

PFI Series

Rectangular, Flat Type Proximity Sensor

■ Features

- Easy to mount in narrow space by flat structure (height: 10mm)
- Improved the noise immunity with dedicated IC (DC type)
- Built-in reverse polarity protection circuit, over-current protection circuit (DC type)
- Built-in surge protection circuit
- Red LED operation indicator
- IP67 protection structure (IEC standard)
- Replaceable for micro switches and limit switches



⚠ Please read "Safety Considerations" in operation manual before using.



■ Type

◎ DC 3-wire type

Appearance	Model
	PFI25-8DN
	PFI25-8DP
	PFI25-8DN2 ※
	PFI25-8DP2 ※

※ mark can be customized.

◎ AC 2-wire type

Appearance	Model
	PFI25-8AO
	PFI25-8AC

■ Specification

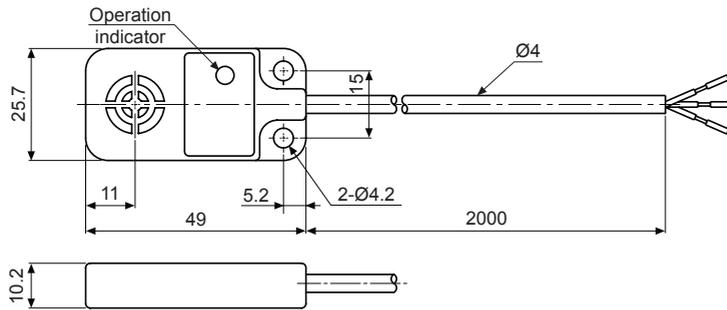
Model	PFI25-8DN PFI25-8DN2	PFI25-8DP PFI25-8DP2	PFI25-8AO PFI25-8AC
Sensing side	Upper side		
Sensing distance	8mm		
Hysteresis	Max. 10% of sensing distance		
Standard sensing target	25×25×1mm (iron)		
Setting distance	0 to 5.6mm		
Power supply (operating voltage)	12-24VDC== (10-30VDC==)		100-240VAC~ (85-264VAC~)
Current consumption/ Leakage current	Max. 10mA		Max. 2.5mA
Response frequency*1	200Hz		20Hz
Residual voltage	Max. 1.5V		Max. 10V
Affection by Temp.	Max. ±10% for sensing distance at ambient temperature 20°C		
Control output	Max. 200mA		5 to 150mA
Insulation resistance	Over 50MΩ (at 500VDC megger)		
Dielectric strength	1,500VAC 50/60Hz for 1 minute		2,500VAC 50/60Hz for 1 minute
Vibration	1mm amplitude at frequency of 10 to 55Hz (for 1 min) in each X, Y, Z direction for 2 hours		
Shock	500m/s ² (approx. 50G) in each X, Y, Z direction for 3 times		
Indicator	Operation indicator: Red LED		
Environment	Ambient temperature: -25 to 70°C, storage: -30 to 80°C		
	Ambient humidity: 35 to 95%RH, storage: 35 to 95%RH		
Protection circuit	Surge protection circuit, Reverse polarity protection circuit, Over-current protection circuit		Surge protection circuit
Cable	Ø4mm, 3-wire, 2m		Ø4mm, 2-wire, 2m
	AWG22, Core diameter: 0.08mm, Number of cores: 60, Insulator out diameter: Ø1.25		
Material	Case: Poly Phenylene Sulfide, Standard cable (black): Polyvinyl chloride (PVC)		
Protection structure	IP67 (IEC standard)		
Approval	CE		
Unit weight	Approx. 70g		

*1: The response frequency is the average value. The standard sensing target is used and the width is set as 2 times of the standard sensing target, 1/2 of the sensing distance for the distance.

※Environment resistance is rated at no freezing or condensation.

Rectangular, Flat Type

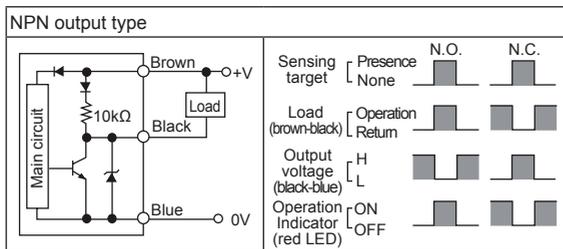
Dimensions



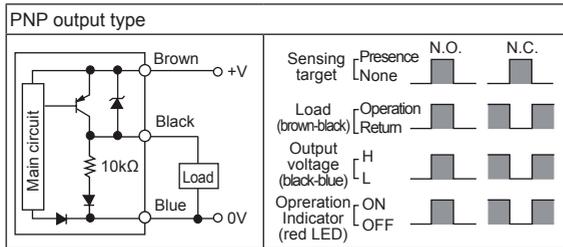
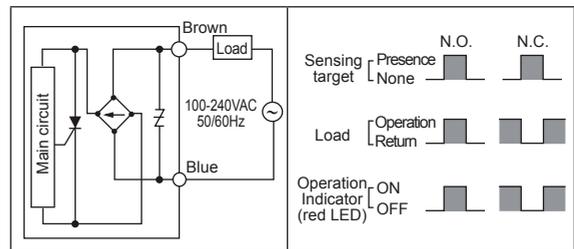
(unit: mm)

Control Output Diagram and Load Operation

DC 3-wire type



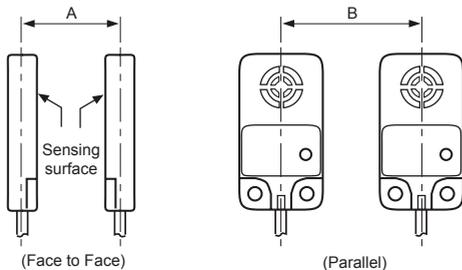
AC 2-wire type



Proper Usage

Mutual-interference

When several proximity sensors are mounted close to one another a malfunction of the sensor may be caused due to mutual interference. Therefore, be sure to provide a minimum distance between the two sensors as below chart indicates.

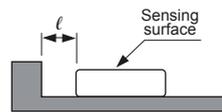


(unit: mm)

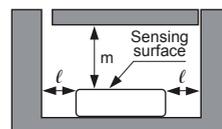
A	100
B	80

Influence by surrounding metals

When sensors are mounted on metallic panel, you must prevent the sensors from being affected by any metallic object except target. Therefore, be sure to provide a minimum distance as below chart indicates.



When the height between the proximity sensor and surrounding metals is same.



When the height between the proximity sensor and surrounding metals is different.

(unit: mm)

l	5
m	15

(A) Photoelectric Sensors

(B) Fiber Optic Sensors

(C) Door/Area Sensors

(D) Proximity Sensors

(E) Pressure Sensors

(F) Rotary Encoders

(G) Connectors/ Connector Cables/ Sensor Distribution Boxes/Sockets

(H) Temperature Controllers

(I) SSRs / Power Controllers

(J) Counters

(K) Timers

(L) Panel Meters

(M) Tacho / Speed / Pulse Meters

(N) Display Units

(O) Sensor Controllers

(P) Switching Mode Power Supplies

(Q) Stepper Motors & Drivers & Controllers

(R) Graphic/ Logic Panels

(S) Field Network Devices

(T) Software